

Taxonomic Notes of Phlaeothripinae (Thysanoptera, Phlaeothripidae) from Korea (I)

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Abstract Eight species of the subfamily Phlaeothripinae (Thysanoptera: Phlaeothripidae) are newly recognized from Korea. Of them two species, *Bamboosiella longiosanum*, *Mystrothrips reteanum*, are described new to science and the other 6 species, *Dexiothrips madrasensis* (Ananthakrishnan), *Holothrips yuasai* (Kurosawa), *Hoplothrips fungosus* Moulton, *Hoplothrips japonicus* (Karny), *Psalidothrips simplus* Haga, and *Sophiothrips nigrus* Ananthakrishnan, are new to Korean fauna. Descriptions and illustrations for these species are provided.

Key words Thysanoptera, Phlaeothripidae, Phlaeothripinae, Korea, new species

INTRODUCTION

Most Thysanoptera have been well known as serious pests injuring crops and fruits especially in green houses. But the species included in Phlaeothripinae shows diverse pattern of life, not only sucking plants sap but also taking fungal hyphae and some species are even known to predator of other arthropods. There have been recorded only 15 species of Phlaeothripinae in Korea until now. A number of Phlaeothripinae species were newly collected in the recent investigations for Korean Thysanoptera fauna. Many of them were collected from dead wood twigs or leaf litter extract, and they are probably mycophagous. From the result of the study, six species are reported for the first time from Korea and two species are described as new species. Descriptions, measurements and illustrations for the all known species are provided.

Abbreviations for collection data, measurements and provincial names are as follows: SNU- Seoul National University, Suwon; NIAST- National Institute of Agricultural Science & Technology, Suwon; GG- Gyeonggi; GW- Gangwon; CB- Chungbuk; CN- Chungnam; JB- Jeonbuk; JN- Jeonam; GB- Gyeongbuk; GN- Gyeongnam; CJ- Cheju; Postoculars- Postocular setae; Ocellars- Ocellar setae; Prothoracic aa- Prothoracic anteroangular setae; Prothoracic ml- Prothoracic midlateral setae; Prothoracic pa- Prothoracic posteroangular setae; Epim- Epimeral setae; Anals- Anal setae.

Bamboosiella longiosanum sp. nov. 긴입관총채벌레 (新稱)

(Figs 1, 9, 16)

Female macroptera. Bicolourous dark brown and light brown; Head, thorax and tube dark brown; abdominal segments I-IX light brown; fore femora, mid- and hind legs dark brown; foretibiae and all tarsi light brown; antennal segments III light brown; other antennal segments brown; wings clear; major setae yellowish brown.

Head 0.9 times as long as wide, weakly sculptured posteriorly; cheeks rounded, narrowed to base; postocular setae 0.6 times as long as compound eyes, expanded at tips; ocellar setae reduced; ocelli not adjacent to compound eyes; maxillary stylets restricted to mouth cone. Antennal segment VIII separated distinctly; antennal segments III and IV with 1+1, 1+2 sense-cones.

Epimeral suture complete; basantral plates absent; prothoracic anteromarginal-, posteromarginal setae reduced; other prothoracic setae expanded at tips; mesonotum sculptured with 2 pairs of pore near anterior margin; metanotum reticulated medially with short, acute median setae; metanotal sternopleural suture absent; foretarsal tooth very small, almost invisible; forewings slightly constricted medially with 5-7 duplicated cilia; major sub-basal wing setae B1 and B2 expanded at tips, B3 acute, longest.

Pelta rectangular with lateral lobes, reticulated except lateral margins, a pair of pore present; 2 pairs of sigmoid wing retaining setae on tergites II-VII; B1, B2, B3 setae on tergum IX acute, B1 shorter than tube; tube almost as long as head.

Measurements of holotype macropterous female in μm . Total distended body length about 1752. Head length 168, from anterior margin of eyes 152, width across eyes 176, across cheeks 172, across basally 140; eye length 64. Pronotum length 148, width 248. Pelta length 76, width 116. Tube length 156, basal width 64, apical width 32. Antennal segments I to VIII length (width) as follows: 28(40); 44(32); 60(28); 56(28); 52(28); 52(24); 40(20); 24(12). Length of setae: Postoculars 36; prothoracic aa 20, pa 36, epim 40; subbasal wings B1 28, B2 32, B3 64; B1 (B2) on tergum IX 108(44); anals 120.

Male macroptera. Similar in color to female; pronotum, forefemur enlarged; big foretarsal tooth present.

Measurements of paratype macropterous male in μm . Total distended body length about 1440. Head length 180, from anterior margin of eyes 164, width across eyes 166, across cheeks 168, across basally 130; eye length 70. Pronotum length 150, width 220. Pelta length 58, width 96. Tube length 130, basal width 62, apical width 32. Antennal segments I to VIII length (width) as follows: 30(38); 46(28); 62(30); 60(30); 56(26); 58(24); 38(18); 24(10). Length of setae: Postoculars 48; prothoracic aa 10, pa 32, epim 46; subbasal wings B1 24, B2 26, B3 64; B1 (B2) on tergum IX 102(42); anals 128.

Specimens examined. Holotype SNU: JN- 1 ♀ mac., Yeongoksa Temple, Mt. Chiri, 19. IX. 1998, H.K. Shin, on bamboo leaves. Paratype SNU: JN- 16 ♀ mac., and 7 ♂ mac., same data with holotype.

Remarks. This species is similar to *B. sasa* Okajima (Okajima, 1995) which known in Japan but it has reduced anteromarginal setae, dark tibiae, different shape of pelta, and minute foretarsal tooth (Okajima, 1998. per. comm.).

Dexiorthrips madrasensis (Ananthakrishnan, 1964) 두색관총채벌레 (新稱)
(Figs 2, 17)

Malacothrips madrasensis Ananthakrishnan, 1964, 85: 109–110. TL: India.

Apelaunothrips madrasensis: Mound, 1974, 27: 18.

Dexiorthrips madrasensis: Okajima, 1979, 4: 40; Okajima & Urushihara, 1992: 161–162.

Male microptera. Body bicolorous light brown and pale yellow; head and pronotum light brown; meso- and metanotum pale yellow, almost clear; tergites II–IV light brown, V–VI light yellow, VII pale yellow shaded with brown, VIII–X brown; all legs pale yellow, almost clear; antennal segments I–II light brown, III–IV pale yellow, V–VIII light brown; major body setae clear.

Head 1.3 times as long as wide, constricted behind eyes, sculptured laterally, reticulated posteriorly; cheeks rounded; 10–12 small setae on surface; postocular setae 1.3 times as long as compound eyes, expanded at tips; ocelli not adjacent to compound eyes; ocellar setae behind postocellus wide apart, acute; maxillary stylets close together but not reaching to post ocular setae; maxillary bridge present. Antennae 8 segments; antennal segment VIII separated by a pedicel; antennal segments III, IV with 1 + 1 and 1 + 2 sense-cones.

Epimeral suture complete; basantral plates absent; prothoracic posteromarginal setae reduced; other prothoracic setae long and expanded at tips; mesonotum reticulated, with a pair of long, expanded lateral setae, 2 pairs of pore; metanotum reticulated, with long acute median setae; metanotal sternopleural suture absent; foretarsal tooth absent; forewing lobes bearing 3 expanded setae.

Pelta reticulated, 2 pairs of short, blunt wing retaining setae on tergites II–VII; tergum VIII without glandular area; B1 setae on tergum IX blunt, as long as tube; tube 0.6 times as long as head.

Measurements of a micropterous male in μm . Total distended body length about 1576. Head length 236, from anterior margin of eyes 208, width across eyes 144, across cheeks 156; eye length 60 in dorsally. Pronotum length 128, width 260. Tube length 124, basal width 68, apical width 36. Antennal segments I to VIII length (width) as follows: 40(40); 52(32); 68(28); 56(28); 64(24); 60(20); 52(20); 40(16). Length of setae: Postoculars 80; prothoracic aa 60, am 52, ml 68, pa 60, epim 68; forewing lobe setae 48; mesonotal laterals 48; metanotal medians 36; B1 (B2) on tergum IX 124 (48).

Specimens examined. NIAST: CJ- 1 ♂ mic., Jocheon, Sonheul, 13. XIII. 1995, G.S. Lee, collected by sweeping.

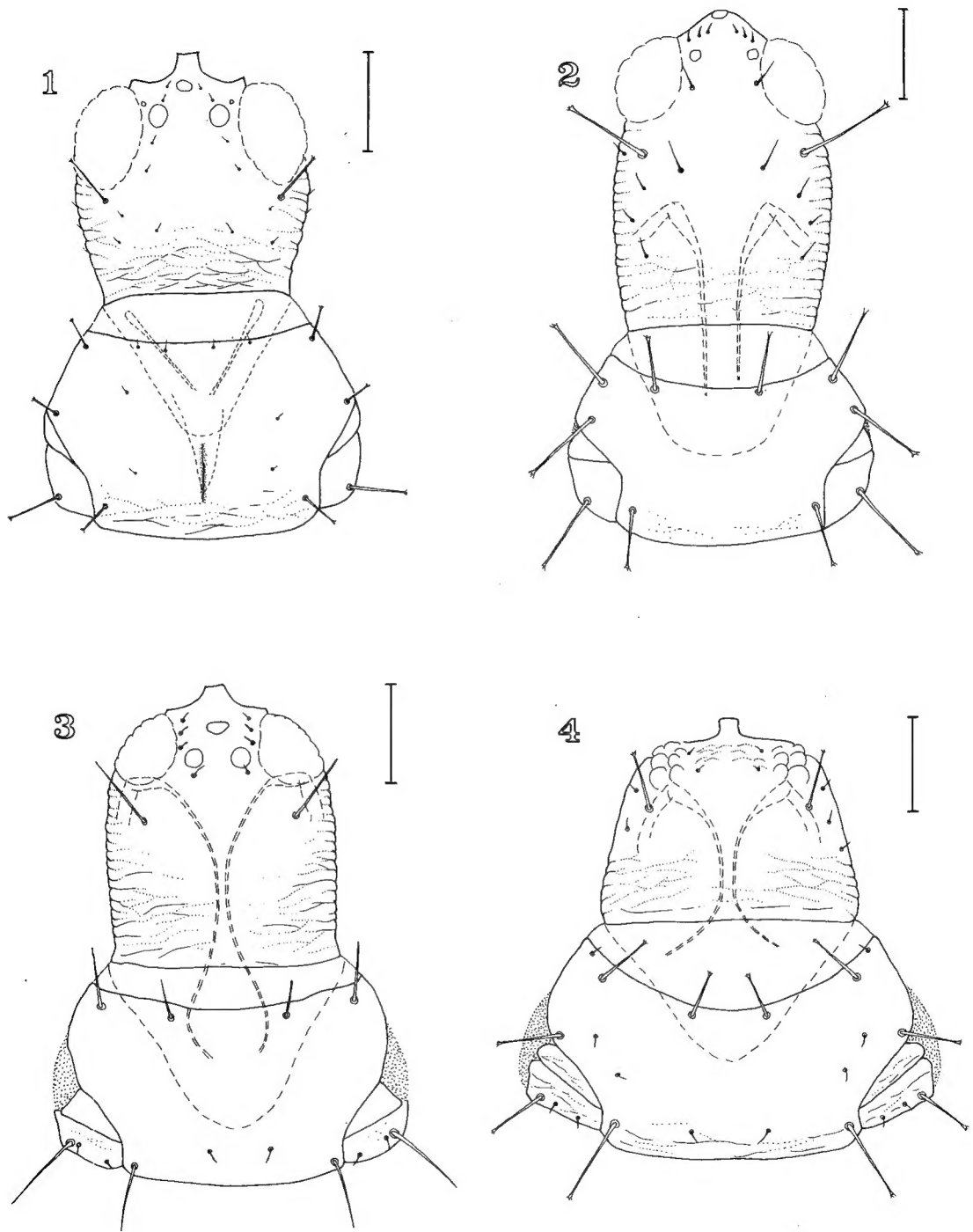
Distribution. Korea, Japan, Malaysia, Indonesia, Philippines, and India.

Holothrips yuasai (Kurosawa, 1954) 유아사관총채벌레 (新稱)
(Figs 3, 10, 18)

Pseudosymphothrips yuasai Kurosawa, 1954: 134–135. TL: Japan.

Holothrips yuasai: Okajima, 1987b: 53.

Male microptera. Head, thorax and all abdominal segments dark brown; femora, basal half of



Figs 1-4. Heads and pronota: 1. *Bamboosiella longiosanum* sp. nov., ♀ mac.; 2. *Dexiorthrips madrasensis* (Ananthakrishnan), ♂ mic.; 3. *Holothrips yuasai* (Kurosawa), ♂ mic.; 4. *Hoplothrips fungosus* Moulton, ♀ mac. [Scales: 100 µm]

foretibiae, mid- and hindtibiae brown; apical half of foretibiae and all tarsi light brown; antennal segments brown except III and basal half of IV, V light brown; tube brown; major body setae pale brown.

Head 1.12 times as long as wide, weakly reticulated near posterior margin; ocelli detached from compound eyes; ocellar setae reduced; postocular setae 1.2 times as long as compound eyes, blunt at tips; maxillary stylets very close together, reaching compound eyes; maxillary bridge absent. Antennal segment VIII broadly joined to VII with complete suture; antennal segment III, IV with 1+2 and 2+2 sense-cones.

Epimeral suture complete; basantral plates absent; prothoracic posteromarginal setae reduced; other prothoracic setae long, blunt at tips; mesonotum reticulated anterior half, with 2 pairs of pore and lateral setae; metanotum reticulated, median setae short and acute, 5 pairs of small, acute setae on anterior parts; metanotal sternopleural suture incomplete; foretarsal tooth well developed; wing buds bearing 3 sub-basal setae, blunt except B1 acute.

Pelta weakly reticulated, without pore; 2 pairs of wing retaining setae on tergites II-VII, anterior pair short and straight, posterior pair long and curved; B1 setae on tergum IX little shorter than tube, acute; B3 setae stout and acute; tube 0.7 times as long as head.

Measurements of a micropterous male in μm . Total distended body length about 3140. Head length 400, from anterior margin of eyes 368, width across eyes 304, across cheeks 328; eye length 104 in dorsally. Pronotum length 260, width 520. Pelta length 156, width 196. Tube length 272, basal width 124, apical width 56. Antennal segments I to VIII length (width) as follows: 44(60); 88(44); 116(52); 132(48); 104(40); 92(40); 64(36); 56(24). Length of setae: Postoculars 120; prothoracic aa 88, am 68, ml 92, pa 100, epim 120; sub-basal wing setae B1 84, B2 72; B1 (B2) on tergum IX 248 (52), B3 100; anals 204.

Specimens examined. SNU: Seoul- 1 ♂ mic., 7. VI. 1997, H.J. Choe, collected by sweeping.

Distribution. Korea and Japan.

Hoplothrips fungosus Moulton, 1928 애버섯관충채벌레 (新稱)

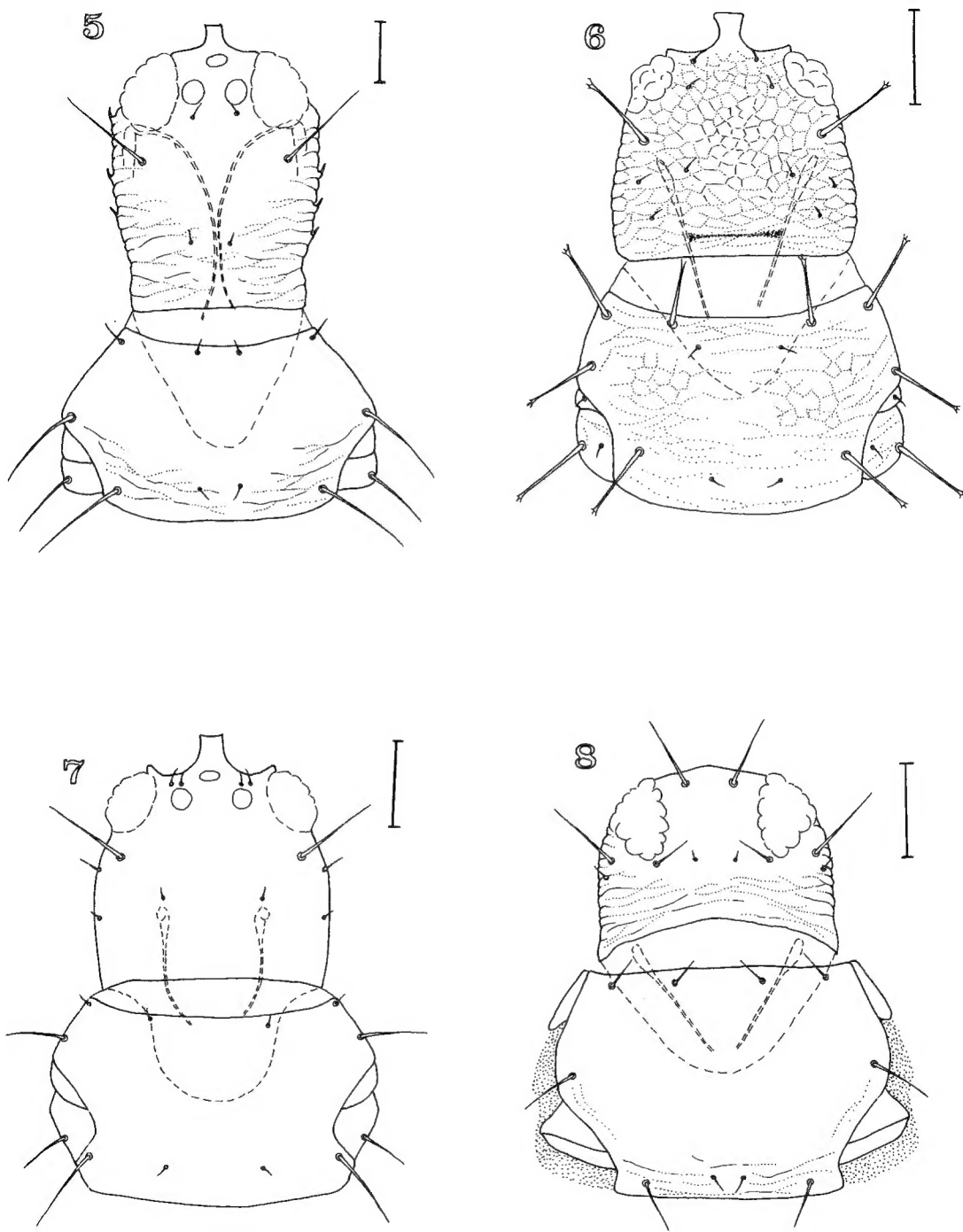
(Figs 4, 12, 19)

Hoplothrips fungosus Moulton, 1928a, 18(98): 305-308; Takahashi, 1936, 60: 445; Kurosawa, 1950: 176. TL: Taiwan.

Female macroptera. Body uniformly brown except tube yellow; major body setae brown; wings clear.

Head as long as wide, rectangular, sculptured near posterior margin; cheeks straight; maxillary stylets wide apart about one third of head width, reaching to compound eyes; mouth cone short and round; maxillary bridge absent; compound eyes over one third of head length; posterior ocelli adjacent to compound eyes; postocular setae 0.3 times as long as compound eyes, expanded at tips; ocellar setae reduced; Antennal segments short, VIII separated distinctly; Antennal segments III and IV with 1+2 sense-cones.

Pronotal epimeral suture complete; basantral plates present; ferna reduced to small sclerites; prothoracic posteromarginal setae reduced; other prothoracic setae long and expanded at tips;



Figs 5-8. Heads and Pronota: 5. *Hoplothrips japonicus* (Karny), ♀ mac.; 6. *Mystrothrips reteanum* sp. nov., ♀ mic.; 7. *Psolidothrips simplus* Haga, ♀ mac.; 8. *Sophiothrips nigrus* Ananthakrishnan, ♀ apt. [Scales: 100 μ m]

mesonotum sculptured along anterior margin, with long, expanded lateral setae and a pair of pore near anterior margin; metanotum sculptured surrounding median parts; metanotal median setae long and acute; metanotal sternopleural suture absent; foretarsal tooth absent; forewings parallel in side, without duplicated cilia; major sub-basal wing setae acute.

Pelta narrow with lateral lobe and a pair of pore, reticulated; a pair of long and slightly curved wing retaining setae on tergites III–VII; B1 setae on tergum IX as long as tube, acute; tube somewhat heavy, 0.6 times as long as head.

Measurements of an apterous female in μm . Total distended body length about 1536. Head length 164, from anterior margin of eyes 148, width across eyes 140; eye length 60. Pronotum length 96, width 220. Forewing length 560. Pelta length 64, width 104. Tube length 84, basal width 52, apical width 28. Antennal segments I to VIII length (width) as follows: 32(32); 40(28); 40(32); 44(32); 40(24); 36(24); 36(20); 36(16). Length of setae: Postoculars 20; prothoracic aa 20, am 32, ml 48, pa 60, epim 52; mesonotal laterals 40; B1 (B2) on tergum IX 80(32); anals 60.

Female aptera. Similar with macroptera; pelta more broad, slender; tergite without wing retaining setae

Male aptera. Color almost same with female; smaller in length (about 1288 μm); head more slender than female, almost rectangular, more sculptured; pronotum and fore femora enlarged; big foretarsal tooth developed, variable in size; inner side of forefemora and foretibiae with small tooth.

Specimens examined. SNU: GB- 7♀ mac., 4♀ apt. and 1♂ apt., Sangju, 4. VIII. 1998, K.S. Woo, on dead twigs; CN- 22♀ apt and 14♂ apt., Mt. Seonggeo, Cheonan, 11. IV. 1998, S.W. Park, on dead twigs; GG- 9♀ mac. and 2♀ apt., Suwon, 3. IX. 1998, H.K. Shin, on dead branches.

Distribution. Korea, Japan, and Taiwan.

Remarks. Male has stout pronotum and forelegs in comparison with female. In apterous specimens pelta shape are laterally long triangular and sense-cones 2+2 on antennal segment III and IV.

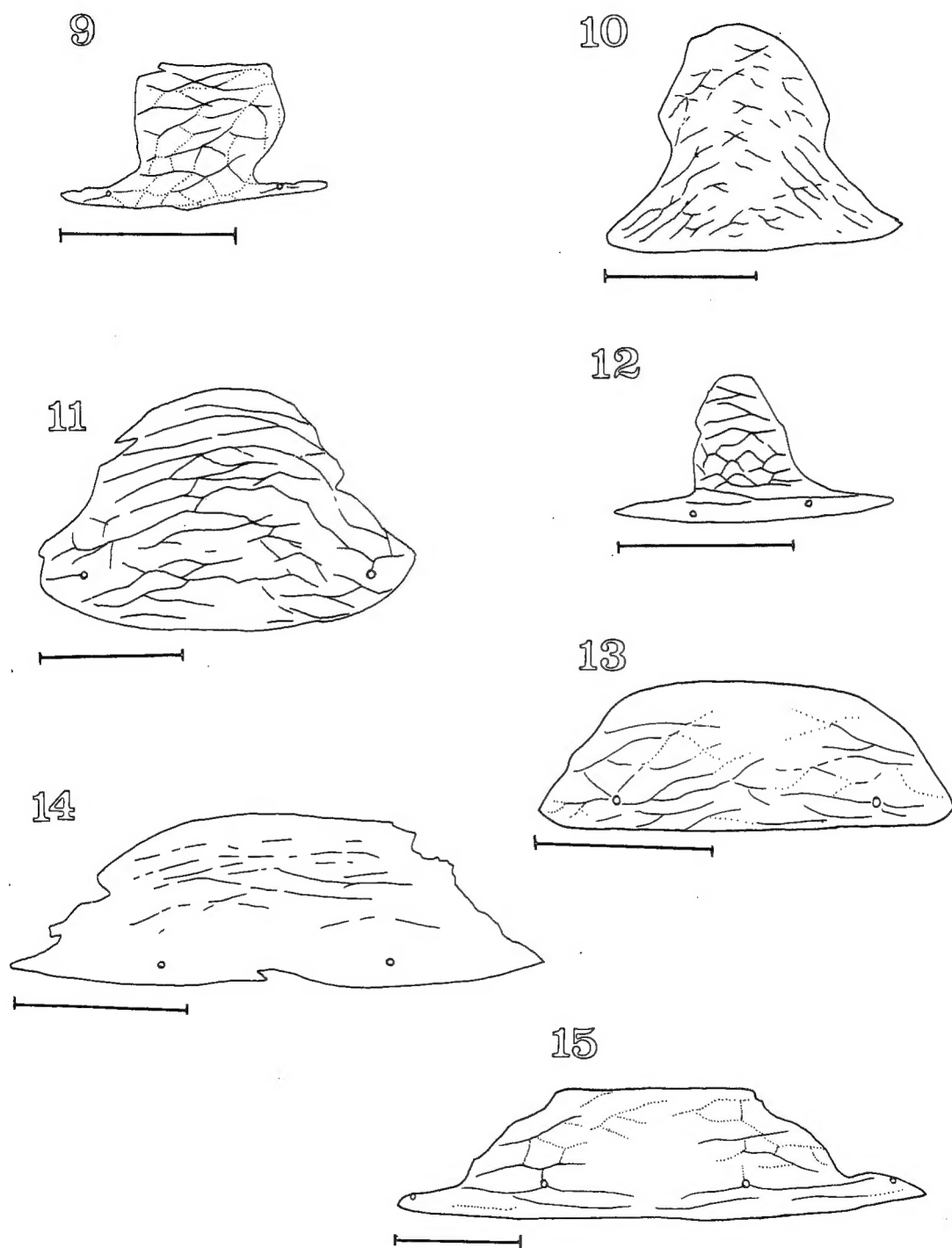
Hoplothrips japonicus (Karny, 1913) 버섯관총채벌레 (新稱)
(Figs 5, 11, 20)

Dolerothrips japonicus Karny, 1913: 122–128; Moulton, 1928b: 330. TL: Japan.

Hoplothrips japonicus: Miyazaki et Kudo, 1987: 90.

Female macroptera. Body blackish brown; head, thorax and all abdominal segments black; foretibiae brown; all tarsi, basal 1/5 of mid and hind tibia, antennal segments III, basal half of IV, V and basal third of VI are yellowish brown; wings clear; major body setae pale brown.

Head 1.3 times as long as wide, slightly constricted at base, posterior parts of dorsal surface sculptured; cheeks parallel, with some stout setae; maxillary stylets deeply retracted, reaching to compound eyes; maxillary bridge absent; ocelli adjacent to compound eyes; postocular setae well developed, 1.7 times as long as compound eyes, pointed at tip. Antennal segment III longest, with transverse lines of sculpture in basal third; antennal segments III, IV with 1+2, 2+2 sense-cones; segment VIII slightly constricted at base.



Figs 9-15. Peltae: 9. *Bamboosella longiosanum* sp. nov., ♀ mac.; 10. *Holothrips yuasai* (Kurosawa), ♂ mic.; 11. *Hoplothrips japonicus* (Karny), ♀ mac.; 12. *Hoplothrips fungosus* Moulton, ♀ mac.; 13. *Mystrothrips reteanum* sp. nov., ♀ mic.; 14. *Psalidothrips simplus* Haga, ♀ mac.; 15. *Sophiothrips nigrus* Ananthakrishnan, ♀ apt. [Scales: 100 µm]

Pronotum with major setae long and acute, anteromarginal setae shortest; epimeral suture complete; basantral plates absent; mesonotum sculptured; metanotum with a pair of short anterior setae and a pair of longer mid lateral setae, reticulated entirely; metathoracic sternopleural sutures incomplete. Foretarsal tooth well developed. Forewings parallel in side, with 15-16 duplicated cilia; major sub-basal setae pointed, B1 and B2 longer.

Pelta 'D-shaped', reticulated; tergites II-VII each with 2 pairs of sigmoid wing retaining setae; B1 setae on tergite IX shorter than tube; tube as long as head.

Measurements of a macropterous female in μm . Total distended body length about 3576. Head length 348, from anterior margin of eyes 316, width across eyes 252, across cheeks 276; eye length 92. Pronotum length 256, width 488; forewing length 1440. Pelta length 148, width 272. Tube length 304, basal width 116, apical width 56. Antennal segments I to VIII length (width) as follows: 72(56); 76(40); 128(44); 120(40); 112(36); 96(36); 76(28); 52(20). Length of setae: Postoculars 156; prothoracic aa 80, ml 188, pa 180, epim 320; sub-basal wings B1 76, B2 172; B1 (B2) on tergum IX 200(48); anals 228.

Female microptera. Similar to female macroptera; curved wing retaining setae on tergite II-VII; forewing lobe (about 128 μm long) bearing a long acute setae.

Male macroptera. Similar to female macroptera but smaller in length (about 2880 μm), bigger foretarsal tooth; sternite VIII with broad, transverse glandular area extending to lateral margins.

Male microptera. Similar to female microptera; but smaller in length (about 2680 μm); pronotum and forelegs greatly enlarged.

Specimens examined. SNU: CN- 2 ♀ mac., 23 ♀ apt. and 3 ♂ apt., Mt. Seonggeo, Cheonan, 11. IV. 1998, S.W. Park, on dead twigs; 7 ♀ mac., 19 ♀ apt. and 3 ♂ apt., Bangdong, Daejeon, 16. V. 1998, H.K. Shin, on dead twigs; JB- 15 ♀ mac., 28 ♀ mac. and 10 ♂ apt., Dapmok, Mt. Paekun, 29. VII. 1998, H.K. Shin, on dead twigs; CJ- 5 ♀ apt., Cheju, 28. VIII. 1998, S.W. Park, on dead twigs; GB- 24 ♀ apt., 16 ♀ mac. and 5 ♂ apt., Sangju, 4. VIII. 1998, K.S. Woo, on dead twigs; GG- 28 ♀ apt., 14 ♀ mac. and 5 ♂ apt., Suwon, H.K. Shin, on dead twigs.

Distribution. Korea, Japan, and China (Guangdong).

Ramarks. This species is the most common mycophagous Thysanoptera found in Korea. It is one of the largest species and often collected together with other species such as *H. fungosus*, *Karnyothrips* sp. etc. Male shows a distinct allometric growth in pronotum, forefemora, and foretarsal tooth.

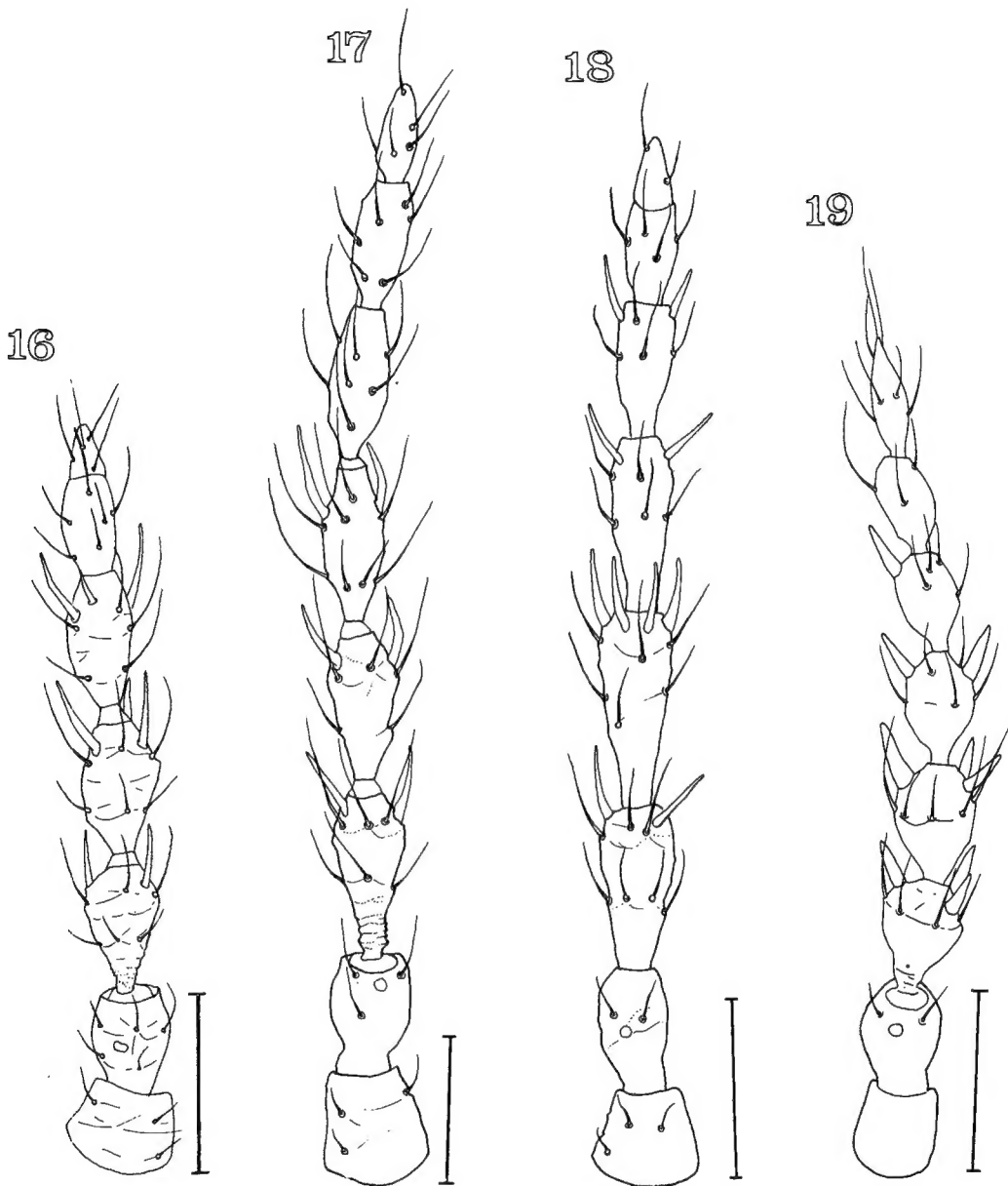
Mystrothrips reteanum sp. nov. 그물무늬관충채벌레 (新稱)

(Figs 6, 13, 21)

Female microptera. Body uniformly brown; antennae and legs concolorous with body; tube yellow; major setae pale brown.

Head 1.0 times as long as wide, reticulated; cheek rounded; ocelli absent; maxillary bridge present; maxillary stylets V-shaped, not reaching to the postocular setae; postocular setae well developed, 1.6 times as long as compound eyes, expanded at tips. Antennae not so slender, segment VIII completely separated by a pedicel; sense-cones 1+1 on antennal segment III, 2+1 on IV.

Pronotum rectangular, sculptured laterally, reticulated medially; epimeral suture complete; all pronotal



Figs. 16-19. Antennae: 16. *Bamboosiella longiosanum* sp. nov., ♀ mac.; 17. *Dexiothrips madrasensis* (Ananthakrishnan), ♂ mic.; 18. *Holothrips yuasai* (Kurosawa), ♂ mic.; 19. *Hoplothrips fungosus* Moulton, ♀ mac. [Scales: 100 µm]

setae are well developed, expanded at tips; basantral plates small or weakly developed; mesonotum sculptured with a pair of long lateral setae, expanded at tips; metanotum reticulated entirely, with a pair of short, acute median setae; metanotal sternopleural suture absent; sub-basal wing setae expanded at tips.

Pelta sculptured with a pair of pore; tergites II-VII each with 1 pair of straight wing-retaining setae; B1, B2, B3 setae on tergite IX blunt at tips, B1 as long as tube; tube 0.9 times as long as head, weakly reticulated.

Measurements of holotype micropterous female in μm . Total distended body length about 1784. Head length 190, from anterior margin of eyes 170, width across eyes 156, across cheeks 188; eye length 46. Pronotum length 114, width 256. Pelta length 68, width 184. Tube length 160, basal width 86, apical width 38. Antennal segments I to VIII length (width) as follows: 42(40); 52(38); 62(40); 52(36); 58(34); 56(26); 44(20); 42(16). Length of setae: Postoculars 72; prothoracic aa 64, ml 52, pa 64, epim 70; mesonotal laterals 44; subbasal wings B1 46, B2 42, B3 50; B1 (B2) on tergum IX 138 (70); anals 110.

Male microptera. Similar to female microptera; foretarsal tooth present; sternite VIII without glandular area.

Measurements of paratype micropterous male in μm . Total distended body length about 1584. Head length 170, from anterior margin of eyes 150, width across eyes 150, across cheeks 170; eye length 38. Pronotum length 142, width 256. Pelta length 62, width 158. Tube length 130, basal width 82, apical width 34. Antennal segments I to VIII length (width) as follows: 40(40); 52(34); 58(36); 50(34); 54(30); 58(22); 42(20); 38(14). Length of setae: Postoculars 64-60; prothoracic aa 56-60, ml 62, pa 60, epim 66-60; sub-basal wings B1 48, B2 44-50, B3 50-52; B1 (B2) on tergum IX 132-114 (70-80); anals 102.

Specimens examined. Holotype SNU: GB- 1 ♀ apt., Sangju, 8. VI. 1998, H.K. Shin, on leaf litter; Paratype SNU: GB- 13 ♀ apt., 5 ♂ apt., same data with holotype; JB- 3 ♀ apt. and 1 ♂ apt., Wanju, 6. VIII. 1994, W.K. Lee, on leaf litter; 3 ♀ apt., Munkyoung, 2. VII. 1995, S.Y. Lee, on leaf litter.

Remarks. This species has only 2 sense-cones on antennal segment III whereas other species of the genus has 3 sense-cones (Mound, 1970). Only a pair of postocular setae and a pair of mid-dorsal setae developed on head surface, no other additional setae on head.

Psalidothrips simplus Haga, 1973 민무늬관총채벌레

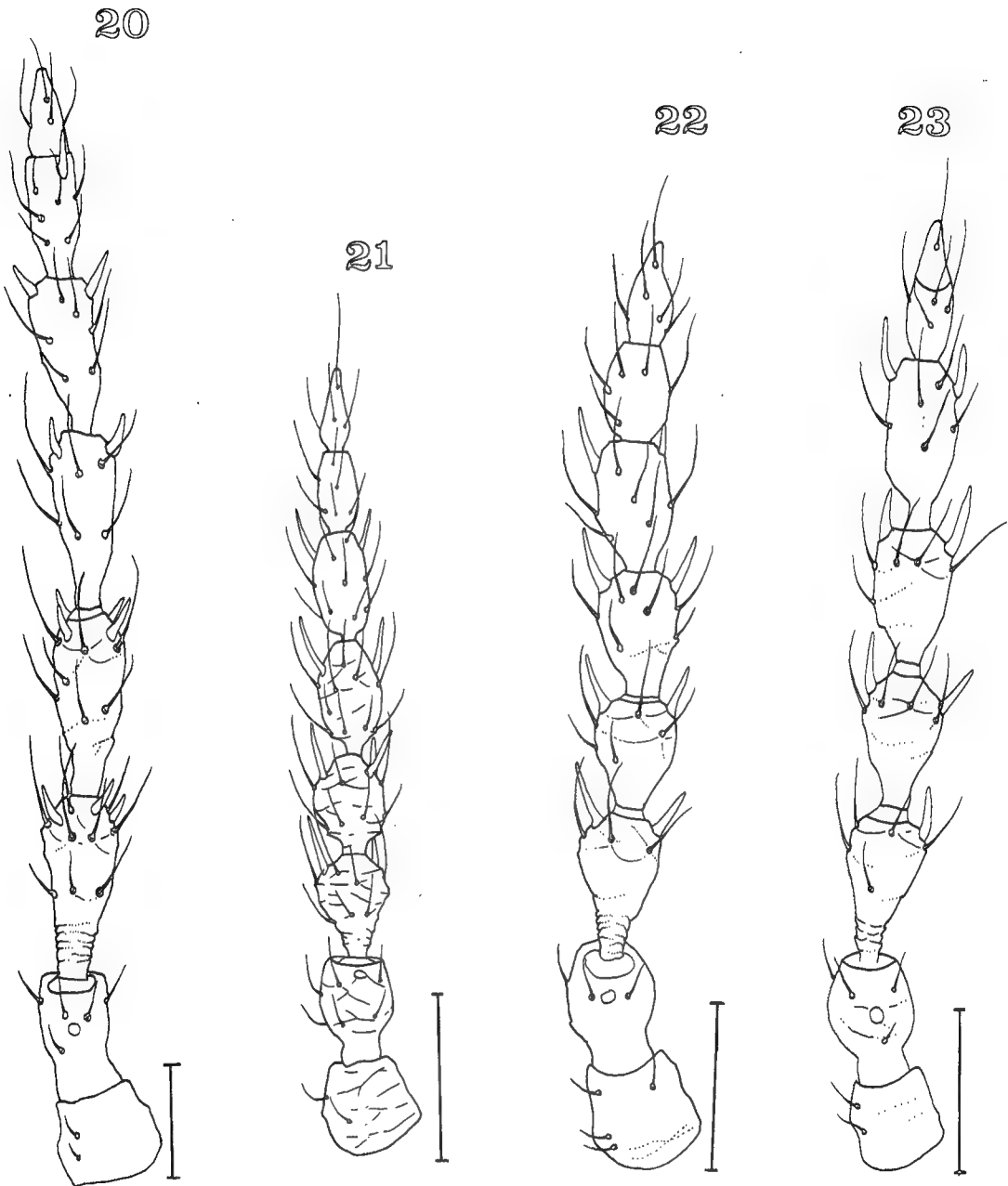
(Figs 7, 14, 22)

Psalidothrips simplus Haga, 1973: 77-79 (Japan); Okajima, 1983: 12, 1992: 548-549. TL: Japan.

Female macroptera. All the body light brown; antennal segments I and II darker than other segments; legs yellower than body; wings light brown; major body setae yellow.

Head 0.97 times as long as head, strongly constricted behind eyes, without sculpture or strong setae on surface; cheeks rounded; ocelli not adjacent to compound eyes; maxillary stylets wide apart, reaching to basal one thirds of head capsule; maxillary bridge absent; mouth cone short and rounded, constricted laterally; postocular setae 1.4 times as long as compound eyes, acute. Antennae 8 segments; antennal segment VIII separated by a pedicel; antennal segments III and IV with 1+1 sense-cones.

Epimeral suture complete; basantral plates absent; pronotal anteroangular, anteromarginal,



Figs. 20-23. Antennae: 20. *Hoplothrips japonicus* (Karny), ♀ mac.; 21. *Mystrothrips reteanum* sp. nov., ♀ mic.; 22. *Psilodothrips simplus* Haga, ♀ mac.; 23. *Sophiothrips nigrus* Ananthakrishnan, ♀ apt. [Scales: 100 μ m]

posteromarginal setae reduced; other pronotal setae long and acute; mesonotum without reticulations, lateral setae reduced; metanotal sternopleural suture present but incomplete, medial setae short and

acute; foretarsal tooth absent; forewings parallel in side, without duplicated cilia; sub-basal wing setae short and acute.

Pelta D-shaped, with a pair of pore, without reticulations; a pair of straight, acute wing retaining setae on tergites II–VIII; B1 setae on tergum IX shorter than tube, acute; tube 0.7 times as long as head.

Measurements of a macropterous female in μm . Total distended body length about 1960. Head length 216, from anterior margin of eyes 192, width across eyes 188, across cheeks 196; eye length 56. Pronotum length 148, width 296. Forewing length 880. Pelta length 80, width 176. Tube length 140, basal width 76, apical width 32. Antennal segments I to VIII length (width) as follows: 48(40); 52(36); 64(32); 52(32); 48(36); 48(28); 44(20); 48(16). Length of setae: Postoculars 80; prothoracic ml 48, pa 84, epim 36; B1 (B2) on tergum IX 108(36); anals 124.

Female aptera. Similar with female macroptera; ocelli absent; wing retaining setae reduced.

Specimens examined. SNU: GB- 3♀ apt., Sangju, 27. IV. 1998, H.K. Shin, on leaf litter; GW- 1♀ apt. and 1♀ mac., Mt. Gaebang, 27. VIII. 1997, T.S. Kweon, on leaf litter.

Distribution. Korea, Japan, and China (Guizhou, Guangdong, Hainan).

***Sophiothrips nigrus* Ananthakrishnan, 1971 주름관총채벌레 (新稱)**

(Figs 8, 15, 23)

Sophiothrips nigrus Ananthakrishnan, 1971: 197; Okajima, 1987a: 552–554, 1994: 37–38. TL: India.

Nanothrips nigrus : Mound, 1977: 180.

Female aptera. Thorax, all abdominal segments include tube dark brown; head light brown; antennae clear, all legs clear with femora shaded brown basally; major body setae clear.

Head 0.72 times as long as wide, weakly sculptured posteriorly; maxillary stylets restricted to mouth cone; maxillary bridge absent; mouth cone short and rounded; ocelli absent; a pair of ocellar setae almost as long as post ocular setae, acute; compound eyes much longer dorsally; postocular setae as long as compound eyes, acute; 2 pairs of small, acute setae between postocular setae. Antennae 8 segments, antennal segments VII and VIII broadly jointed, with complete suture; antennal segment II with a circular sensorium in basal half; antennal segments III, IV with 0+1 and 1+1 sense-cones.

Epimeral suture complete; basantral plates small; pronotal anteroangular, anteromarginal and posteromarginal setae reduced; other pronotal setae long and acute; mesonotum with 2 pairs of pore, sculptured; metanotum weakly reticulated except medially, with a pair of short acute median setae and 4 pairs of short, acute setae around them; metanotal sternopleural suture incomplete; small foretarsal tooth present.

Pelta with lateral lobes, a pair of pore, reticulated but faint medially; a pair of long, acute, straight wing retaining setae on tergites II–VIII; tube heavy, 1.9 times as long as wide, strongly sculptured on surface; B1 setae on tergum IX shorter than tube, acute; tube 1.1 times as long as head.

Measurements of an apterous female in μm . Total distended body length about 1688. Head length 148, from anterior margin of eyes 132, width across eyes 120, across cheeks 184; eye length 60 in

dorsally, 36 in ventrally. Pronotum length 184, width 336. Pelta length 64, width 264. Tube length 152, basal width 80, apical width 32. Antennal segments I to VIII length (width) as follows: 32(36); 48(36); 68(32); 56(36); 60(32); 68(28); 32(20); 20(16). Length of setae: Postoculars 60; ocellars 50; prothoracic aa 30, ml 48, pa 42, epim 74; B1 (B2) on tergum IX 82(28); anals 52.

Specimens examined. SNU: CJ- 4♀ apt., Kwanumsa Temple, 16. IV. 1998, S.H. Lee, on dead twigs.

Distribution. Korea, Japan, Taiwan, Singapore, Malaysia, Indonesia, and Thailand.

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한국산 관총채벌레아과 (총채벌레목, 관총채벌레과)의 한국미기록종 및 신종 보고 (I)

신 현 경 · 우 건 석

서울대학교 농업생명과학대학 응용생물화학부 곤충분류실

관총채벌레아과의 6종 <*Dexiorthrips madrasensis* (Ananthakrishnan) 두색관총채벌레, *Holothrips yuasai* (Kurosawa) 유아사관총채벌레, *Hoplothrips fungosus* Moulton 애버섯관총채벌레, *Hoplothrips japonicus* (Karny) 버섯관총채벌레, *Psalidothrips simplus* Haga 민무늬관총채벌레, *Sophiorthrips nigrus* Ananthakrishnan 주름관총채벌레>을 한국 미기록종으로 보고하고, 2종 <*Bamboosiella longiosanum* sp. nov. 긴입관총채벌레, *Mystrothrips reteanum* sp. nov. 그물무늬관총채벌레>을 신종으로 기재하였다. 또한 이들 종의 형태적 특징을 기술하고 서식처 및 분포지를 정리하였다.

검색어 : 총채벌레목, 관총채벌레과, 관총채벌레아과, 신종

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